GE Healthcare

Short Instructions 56-0426-00 AO

Flanging/Start Up Kit

Flanging/Start Up Kit (Code No. 19-5079-01, 120 V and 19-5090-01, 230V) is used to flange tubing ends (0.5–0.8 mm i.d.) so that the tubing is retained inside the tubing connector. With the flanging kit it is possible to prepare tubing of any length to fit a specific system.

The Flanging heater is based on a standard soldering iron with a special tip for flanging of capillary tubings.

Flanges are made by pushing the capillary tubing onto the heated flanging tip. As the tubing heats up it flares out; the flanging tip is removed and the tubing is pressed against a flat, cool surface in order to fix the flange.

Check the packing list to ensure receipt of all necessary parts.

Important user information

Meaning: Consult the instruction manual to avoid personal injury or damage to the product or other equipment.

Meaning: Hot surface. Risk of injury and fire.

WARNING!

The WARNING! sign is used to call attention to the necessity to follow an instruction in detail to avoid personal injury. Be sure not to proceed until the instructions are clearly understood and all stated conditions are met.

CAUTION!

The CAUTION! sign is used to call attention to instructions or conditions that shall be followed to avoid damage to the product or other equipment.
Be sure not to proceed until the instructions are clearly understood and all stated conditions are met.

Note

The Note sign is used to indicate information important for trouble free or optimal use of the product. Should you have any comments on this instruction, we will be pleased to receive them at: GE Healthcare Bio-Sciences AB, SE-751 84 Uppsala, Sweden

Safety

WARNING! Hot-surface. Risk for fire or injury if soldering tip or element is not handled with care.

WARNING! A fire may result if the appliance is not used with care, therefore;

- be careful when using the appliance in places where there are combustibles
- do not apply to the same place for a long time
- do not use in the presence of an explosive atmosphere
- be aware that heat may be conducted to combustible materials
- place the appliance on its stand after use and allow it to cool down
- do not leave the appliance unattended when it is switched on.

Please read the instruction leaflet delivered with the soldering iron for safe use of the flanging heater.

WARNING! Connect to grounded mains outlet only.

WARNING! Be careful when removing hot cooling collars. Disconnect the device and wait 15 minutes before changing the cooling collar!

Selecting the proper cooling collar

Mains voltage differences cause temperature variations in the flanging tool's tip. With certain voltages the tip becomes overheated and it melts the tubing.To solve this problem there are two cooling collars used singly or together for different mains voltages. Use the appropriate collar or collars depending on the main voltage from Table 1.

WARNING! Be careful when removing hot cooling collars. Disconnect the device and wait 15 minutes before changing the cooling collar!

Table 1. Mains voltage and recommended cooling collars.

Mains voltage/volts	Cooling collars
90	unnecessary
110	B (10 mm)
120	A+B (15 mm)
132	A+B (15 mm)
198	unnecessary
220	A (5 mm)
240	B (10 mm)
264	A+B (15 mm)

How to make a flange

1. Heat the flanging tool for at least 20 minutes before use.
2. Cut with a sharp blade at a 90° angle the appropriate length of capillary tubing.
3. Thread the tubing through the nipple screw and the nipple (figure 1).
4. Grasp the tubing with the tubing clamp behind the nipple. Insert the tubing into the small hole in the black support on the flanging tool (figure 2), and slide the nipple up to the support. Reposition the clamp closely behind the nipple. This ensures that the correct length of tubing (1.5 mm) protrudes for flanging.
5. Position the tubing end onto the flanging tip. Make sure the tubing end is parallel to the flat surface of the flanging tip (figure 3).
6. Push the 1.5 mm of tubing onto the flanging tip projection and heat for about 5 seconds. Then push hard until the heated 1.5 mm of protruding tubing flares out against the flanging tip base (figure 4).
7. Remove the tubing from the flanging tip and press the newly formed flange against a flat, cool surface (figure 5).
8. Ensure that the flange is not narrower than the tubing by inserting the flanging tip briefly into the tubing.
9. The flange is now finished (figure 6). It should be concentric with the tubing bore and slightly smaller than the diameter of the tubing nipple.

Technical specification

Power requirements	100–120 V ~ (AC) Model 19-5079-01 220–240 V ~ (AC) Model 19-5090-01
Frequency	50–60 Hz
Power consumption	14 W
Safety standards	This product meets the requirements of the Low Voltage Directive (LVD) 73/23/EEC through the harmonized standards EN60335-2-45

Note: *The declaration of conformity is valid for the instrument when it is:*

- *used in laboratory locations,*
- *used in the same condition as it was delivered from GE Healthcare except for alterations described in the user manual,*
- *used as a "stand alone" unit*

Maintenance

CAUTION! Only spare parts approved or supplied by GE Healthcare may be used for maintaining and servicing of Flanging heater.

The supply cord cannot be replaced. If the cord is damaged the appliance should be scrapped.

Read the instruction leaflet delivered with the soldering iron for maintenance of the flanging heater.

Spare parts

CAUTION! Only spare parts approved or supplied by GE Healthcare may be used for maintaining and servicing of Flanging heater.

Designation	Code No.	No. per pack
Flanging heater 120 V	19-5080-01	1
or 220 V	19-5098-01	1
Flanging tip	19-7487-01	1
Tubing clamp	19-7844-01	1
Cooling collars (A+B)	19-7825-01	2

Accessories

Designation	Code No.	No per pack
Capillary tubing (o.d. 1.8 mm, i.d. 0.5 mm)	19-7477-01	2 m
Tubing (o.d. 1.7 mm, i.d. 1.1 mm)	19-0041-01	5 m
Tubing connectors	19-7476-01	5
Wrench	19-7481-01	1

Troubleshooting

Problem	Solution
1. Flange is uneven	Center the flanging tip in the tubing bore. Heat the tubing for 5 seconds, no longer. Excessive heating could cause the tubing to melt unevenly. Make sure the tubing has been cleanly cut to a 90° angle.
2. Diameter of flange is too small	When heating the tubing be sure the entire 1.5 mm of tubing is on the flanging tip projection. Heat the flanging tool for at least 20 minutes before use.
3. Tubing end does not start easily onto the flanging tip	Heat the flanging tool for at least 20 minutes before use. Make sure the tubing has been cleanly cut to a 90° angle.
4. Flange rolls back on itself	The correct length of tubing protuberance is important; it should be 1.5 mm.
5. Tubing protuberance bends and collapses when pushed onto flanging tip	Measure tubing protuberance (see solution no. 4).

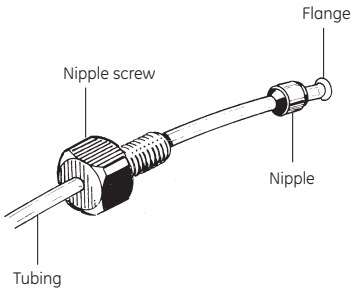

Fig 1. Nipple screw and nipple on tubing.

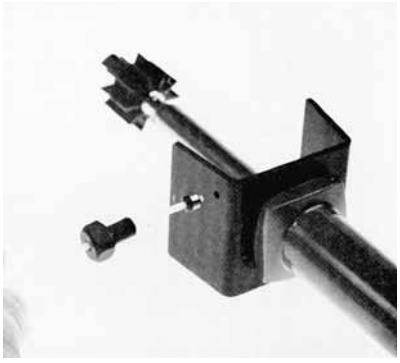

Fig 2. Measuring the tubing protuberance.

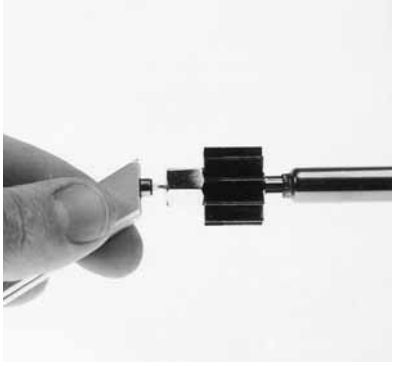

Fig 3. Tubing end parallel with flanging tool surface.

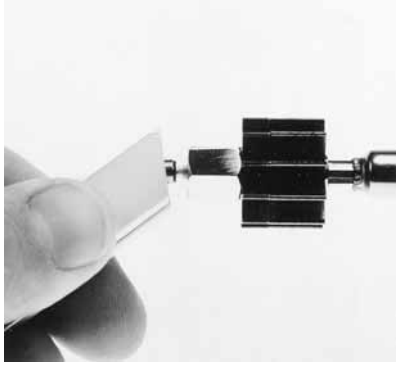

Fig 4. Tubing end pushed against the flat surface of the flanging tip.

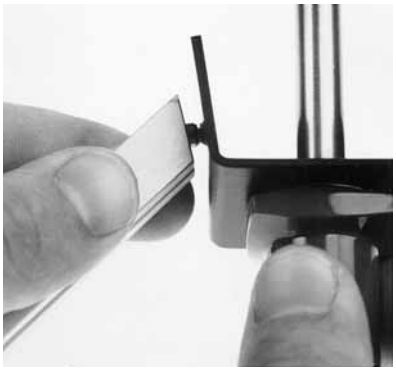

Fig 5. Pressing the warm flange against a cool, flat surface.

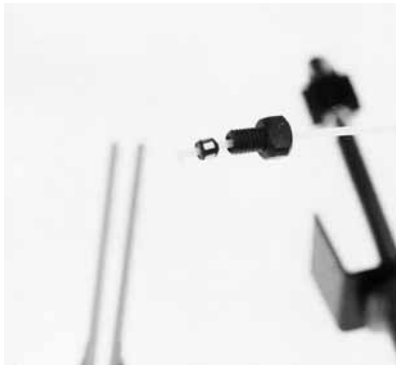

Fig 6. Completed tubing flange.

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